

IN THE SPECIFICATION:

Please amend the Summary of the Invention at page 3, line 10 to page 5, line 15 as shown below.

--The present invention has been made to solve the above problems, and provides a technique for enabling use of an image scanner device ~~; which is connected to a general information processing apparatus;~~ on a network at a low cost, and further, for improvement of the user's convenience by realizing maintenance-free firmware in hardware for use of the scanner device on the network.

Further, the present invention provides a technique for enabling the use of an image scanner device ~~; which is connected to a general information processing apparatus;~~ on a network at a low cost, and further, for enabling use of remote scanner without any substantial change in an existing application to use the image scanner.

~~According to the present invention, the foregoing objects are attained by providing a network scanning system having: a connection apparatus including a scanner interface and a network interface, which are connected to a scanner device connected to a general information processing apparatus, so as to cause the scanner device to function as a network scanner device; and a control apparatus to control the connection apparatus via a network, wherein the connection apparatus comprising : standard input/output means for receiving bitmap image data generated by drawing processing in the control apparatus via the network interface then displaying the bitmap image data on a predetermined display unit, and outputting an input into a predetermined instruction input unit from a user to the~~

control apparatus via the network interface; and scanner communication means for receiving an instruction command to the scanner device issued by the control apparatus via the network interface then outputting the command to the scanner interface, and transmitting data received in the scanner interface to the control apparatus via the network interface, and wherein the control apparatus comprising: virtual standard input/output means for transmitting bitmap image data drawn in accordance with a request from a scanner control application to the standard input/output means of the connection apparatus; and notifying the application of an input from the standard input/output means; thereby causing the standard input/output mean of the connection apparatus to function as a virtual standard input/output device of the control apparatus; and virtual scanner communication means for transmitting a request command from a scanner driver for the scanner device to the scanner communication means of the connection apparatus; and outputting information from the scanner communication means to the scanner driver; thereby causing the scanner device connected to the connection apparatus to function as a scanner device virtually connected to the control apparatus;

In one aspect, the invention is directed to a scanner connection apparatus comprising a first communication interface that connects to an image scanning device; a second communication interface that connects to a control apparatus on a network, where the control apparatus has functions of setting a scanning condition and of communication with the image scanning device; a display unit having a screen that displays an image; a touch-sensitive panel arranged on the screen of the display unit; and a processor that controls the scanner connection apparatus, wherein, the display unit, the touch-sensitive

panel and the processor configure a selection screen displaying unit for inputting a user instruction and for enabling to issue a scanning start command for the image scanning device, by; the processor receiving, from the control apparatus via the second communication interface, selection menu image data in which images of items to be selected by a user are arranged, where one of the items is used to instruct a scanning start; the display unit displaying the received selection menu image data; the processor detecting a touch on the touch-sensitive panel by the user's operation; and the processor transmitting, via the second communication interface, information specifying an item designated by the user, to the control apparatus, based on the touch on the touch-sensitive panel, so that a scanning start command is output to the image scanning device; wherein, the first communication interface, the second communication interface, the processor and the image scanning device connected to the first communication interface configure a unit which operates as a local image scanner of the control apparatus by the processor's operations of; outputting the scanning start command to the image scanning device via the first communication interface as a response to the scanning start instruction by the user; receiving image data of an original obtained by the image scanning device via the first communication interface; and transmitting the image data of the original via the second communication interface to the network.

In another aspect, the invention is directed to a scanner connection apparatus comprising: a first communication interface that connects to an image scanning device; a second communication interface that connects to a control apparatus on a network, where the control apparatus has functions of communicating with the image scanning device and

of transmitting image data obtained from the image scanning device to a transmission destination on the network; a display unit having a screen that displays an image; a touch-sensitive panel arranged on the screen of the display unit; and a processor that controls the scanner connection apparatus, wherein, the display unit, the touch-sensitive panel and the processor configure a selection screen displaying unit for inputting of a user instruction and for enabling selection of a transmission destination of an image data of an original obtained by the image scanning device, by: the processor receiving, from the control apparatus via the second communication interface, selection menu image data in which images of items to be selected by a user are arranged, where the selection menu image data has two types comprising first menu image data including items representing transmission destinations to be designated by a user and second menu image data including at least an item used to instruct a scanning start by the user; the display unit displaying the received selection menu image data of the first or second menu image data; the processor detecting a touch on the touch-sensitive panel by the user's operation; the processor transmitting, via the second communication interface, information specifying the transmission destination designated by the user, to the control apparatus if the first menu image data is received and displayed, so that the control apparatus specifies the transmission destination of the image data of the original; and wherein, the first communication interface, the second communication interface, the processor and the image scanning device connected to the first communication interface configure a unit which operates as a local image scanner of the control apparatus by: the processor's operations of outputting the scanning start command to the image scanning device via the first communication interface as a response to the

operation of the user if the second menu image data is received and displayed and if the user designates the item used to instruct the scanning start; receiving image data of an original obtained by the image scanning device via the first communication interface; and transmitting the image data of the original via the second communication interface so that the control apparatus transmits the image data of the original to the designated transmission destination.

In yet another aspect, the invention is directed to a scanner connection apparatus, comprising: a first communication interface that connects to an image scanning device; a second communication interface that connects to a control apparatus on a network, where the control apparatus has functions of communicating with the image scanning device and of transmitting image data obtained from the image scanning device to a transmission destination on the network, a display unit having a screen that displays an image; a touch-sensitive panel arranged on the screen of the display unit; and a processor that controls the scanner connection apparatus, wherein, the display unit, the touch-sensitive panel and the processor configure a selection screen displaying unit for inputting of a user instruction and for enabling selection of a transmission destination of image data of an original obtained by the image scanning device, by: the processor receiving, from the control apparatus via the second communication interface, selection menu image data in which images of items to be selected by a user are arranged, where the selection menu image data has two types comprising first menu image data including items representing transmission destinations to be designated by a user and second menu image data including at least an item used to instruct a scanning start by the user; the display unit displaying the

received selection menu image data of the first or second menu image data; the processor detecting a touch on the touch-sensitive panel by the user's operation, and the processor transmitting, via the second communication interface, information specifying the transmission destination designated by the user, to the control apparatus if the first menu image data is received and displayed, so that read image data of an original arrives to the transmission destination designated by the user, wherein the processor performs operations of: outputting the scanning start command to the image scanning device via the first communication interface; receiving image data of an original obtained by the image scanning device via the first communication interface; and transmitting the image data of the original via the second communication interface so that the image data of the original arrives at the designated transmission destination, and wherein, the selection screen displaying unit is used for specifying plural transmission destinations on the network, in which different transmission categories among a facsimile destination, a printer, a FTP destination, a file server, a PC, and a mail destination are included, and the first menu image data includes items representing the plural transmission destinations having different transmission categories in one selection screen.

Other features and advantages of the present invention will be apparent from the following description taken in conjunction with the accompanying drawings, in which like reference characters designate the same name or similar parts throughout the figures thereof.--